as elsewhere, the blood of the bronchial arteries is poured into the pulmonary veins.

Dr. Heale has advanced the opinion that the bronchial arteries do not supply the bronchial mucous membrane at all, and that they neither communicate with the pulmonary arteries nor veins. My observations have given results entirely opposed to this view.

With reference to the view taken by Adriani, and subsequently adopted by Dr. Thomas Williams, that the vessels of the bronchial mucous membrane terminate in the pulmonary veins, and those of the deeper plexus in the bronchial veins, it is not borne out by the experiments I have made, which appear to prove that not only do the same vessels supply the superficial and deep plexuses of the tubes, but that both plexuses discharge their contents into the same receptacles.

II. "On Certain Sensory Organs in Insects, hitherto undescribed." By J. Braxton Hicks, M.D. Lond., F.L.S. &c. Communicated by John W. Lubbock, Esq. Received May 14, 1859.

(Abstract.)

The author commences with an allusion to papers published in the Linnean Society's 'Journal' and 'Transactions' respecting groups of organs, abundantly supplied with nerves, on the bases of the halteres of Diptera, also on the nervures of the wings and on the elytra of Coleoptera; and now gives a drawing which shows forth these organs, and the nerve proceeding to them on the halteres. He then describes, for the first time, somewhat similar organs on the apices of the palpi of some Diptera, and on their base in many Hymenoptera, as *Apis*, *Vespa*, *Nomada*, *Megachile*, *Bombus*, &c. These are well shown in the *Vespa Crabro*, or Hornet, where the nerve is seen expanding in the thin membrane which covers in the opening beneath in the wall of the member.

In the paper also, it is pointed out for the first time, that on the apex of the palpi of Lepidoptera there is invariably found a structure which is more or less of a cavity, generally tubular, and sometimes extending inwards nearly the length of the last segment, but some-

times only a depression. To it a nerve is given which expands on the apex of the cavity.

The author then describes groups of organs, allied in form to those on the palpi, which are to be found on the legs of all insects yet examined. There are about three groups situated about the trochantero-femoral joint, and to them nerves can be distinctly seen proceeding; and in *Meloë* the branch is seen to pass up the opening in the wall, to terminate in a papilla in the centre of the membrane covering it in.

It is also shown that the bladder-like apex of the palpi, instead of being smooth, as is generally described, is covered with a great number of small bodies, something in form like ninepins, sometimes exceedingly small, requiring a $\frac{1}{8}$-inch objective to make them out, when they can clearly be discerned to be a modified condition of true hairs, copiously supplied with nerves. The author names these "*tactile hairs*," and points out their existence in all palpi used for touching, and in other organs subservient to that function. These tactile hairs are very large in the palpi and antennæ of *Dyticus marginalis*. The barrel-like organs of the Lepidoptera are next investigated, and are shown to have a nerve passing up them; but whether proceeding to the apex of the nipple-like papilla on them or not, cannot be quite made out. They are pointed out as being nearly allied to the organs on each of the palpi of the Earwig (*Forficula auricularia*).

The author refers to the sacs found on the antennæ of all insects, which have been fully treated of in two papers read by him before the Linnean Society, and published in their 'Transactions;' and he lastly examines the probable functions of all these organs, which must be of sensation, probably special.

Attention is also called to the value of bleaching the tissues by chlorine in investigating the structure of insects, which process was first used by the author and described by him in the papers above mentioned.

About forty drawings accompany the paper illustrative of the structures described.